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AMSAT NEWS SERVICE
ANS-136

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

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SB SAT @ AMSAT $ANS-136.01
ANS-136 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 136.01
>From AMSAT HQ KENSINGTON, MD.
[MONTH DAY, YEAR]
To All RADIO AMATEURS
BID: $ANS-136.01

STMSat-1 SSTV CubeSat to deploy from ISS May 16

A Slow Scan TV (SSTV) CubeSat developed by students at Saint Thomas More Cathedral School (STM) in Arlington, VA, is set to be deployed from the International Space Station between 1400 and 1500 UT on May 16. For latest date/time check https://twitter.com/STMSAT11.

STM is thought to be the first Elementary school to build their own satellite, even Pre-Kindergarten, Kindergarten, and First Grade students were involved in the project.

The satellite, a 1U CubeSat called STMSat-1, will transmit a SSTV Robot36 mode signal on 437.800 MHz.

Middle School Students took the initiative to begin exploring how to receive data from the CubeSat and formed a Ham Radio Club. There, they learned the basics of operating a ham radio station and explored Slow Scan Television as an option for receiving images once the satellite is deployed.

How Did 400 Grade School Students Built A Nano-Satellite?
http://tinyurl.com/ANS136-NanoSat

Watch the CBS This Morning show report on the satellite
http://tinyurl.com/ANS136-CBS-MorningShow

STMSat-1
https://twitter.com/STMSAT11
https://www.facebook.com/stmsat1/
https://www.facebook.com/groups/491135804399695/
http://www.stmsat-1.org/

[ANS thanks AMSAT-UK for the above information]

2016 AMSAT-NA Board of Directors Nominations Notice

It's time to submit nominations for the upcoming AMSAT-NA Board of Directors election. Three director's terms expire this year: Tom Clark, K3IO, JoAnne Maenpaa, K9JKM, and Lou McFadin, W5DID. In addition, up to two Alternates may be elected for one year terms.

A valid nomination requires either one Member Society or five current individual members in good standing to nominate an AMSAT-NA member for Director. Written nominations, consisting of the nominee's name and call, and the nominating individual's names, calls and individual signatures should be mailed to: AMSAT-NA, 10605 Concord St, #304 Kensington, MD 20895-2526.

In addition to traditional submissions of written nominations, which is the preferred method, the intent to nominate someone may be made by electronic means. These include e-mail, Fax, or electronic image of a petition. Electronic petitions should be sent to MARTHA at AMSAT.ORG or Faxed to (301)822-4371.

No matter what means is used, petitions MUST arrive no later than June 15th at the AMSAT-NA office. If the nomination is a traditional written nomination, no other action is required. If it is other than this, i.e. electronic, a verifying traditional written petition MUST be received at the AMSAT-NA office at the above address within 7 days following the close of nominations on June 15th.

ELECTRONIC SUBMISSIONS WITHOUT THIS SECOND, WRITTEN VERIFICATION ARE NOT VALID UNDER THE EXISTING AMSAT-NA BYLAWS.

Paul Stoetzer, N8HM
AMSAT-NA Secretary

[ANS thanks Paul N8HM for the above information]

AMSAT/TAPR Banquet at the Dayton Hamvention

The tenth annual joint AMSAT/TAPR Banquet will be held on Friday evening, May 20th. This dinner is one of the main AMSAT activities during the Hamvention. Tickets ($35 each) may be purchased from the AMSAT store at www.amsat.org.
THE BANQUET TICKET PURCHASE DEADLINE IS TUESDAY, MAY 17th.

The Banquet will take place at the Kohler Presidential Banquet Center, 4572 Presidential Way, Kettering, OH 45429 (just south of Dayton). Doors open at 6:30 p.m. for a cash bar with the buffet dinner served at 7:00 p.m.

AMSAT and TAPR alternate the task of providing a speaker for the banquet. It is AMSAT¹s responsibility this year.

Michelle Thompson, W5NYV, will present "It¹s just software, right?" She will survey the AMSAT Ground Terminal: Who, what, when, where, why, and how we¹re designing open source radio solutions for the next generation of AMSAT payloads.

Michelle is AMSAT¹s Team Leader for the design and execution of the AMSAT Ground Terminal. The goal is to create a ³5 and Dime² (5 and 10 GHz) digital SDR transceiver that will support both voice and data modes, for both general QSOs and emergency communication, for the Phase 4B satellite and for future AMSAT projects. This is an effort to design an inexpensive ground terminal for amateurs that would cost tens of thousands of dollars commercially, for as much under $1,000 as we can get it.

A true renaissance woman, in addition to being an engineer and a licensed amateur radio operator, Michelle has worked for Qualcomm, attends Burning Man, and is a longtime DEFCON participant. She is also the lead for Organ Donor (an AI pipe organ). Her Phase 4B Weekly Ground Engineering Reports are fascinating reading.

Seating is limited to the number of meals we reserve with the Kohler caterers based on the number of tickets sold by the deadline. Tickets purchased online may be collected at the Books, Shirts & Memberships corner of the AMSAT booth (445-446).

[ANS thanks Steve N9IP and the AMSAT Office for the above information]

Dayton AMSAT Demonstration Plans

AMSAT will again have a demo station at the Dayton Hamvention this year. The station will be located outside the main entrance to Ball Arena, near the AMSAT booth.

This year, the focus of many of the demonstrations will be on the use of inexpensive software defined radio (SDR) equipment as a downlink receiver. Using an SDR like a FUNcube Dongle Pro+, SDRPlay, or AirSpy allows owners of common all-mode transceivers with VHF/UHF functionality (such as the Yaesu FT-817, Yaesu FT-857, Icom IC-706MKIIG, or Icom IC-7100) to add full duplex satellite capability for use with linear transponder satellites at minimal cost. The receiver used will consist of a FUNcube Dongle Pro+ with a low cost 10.1" Windows 10 tablet.

We may also use other radio combinations during the weekend.

Demos will take place during satellite passes from 8:00am (12:00 UTC) until 5:00pm (21:00 UTC) on Friday and Saturday and from 8:00am until 12:00pm (16:00 UTC) on Sunday. Please keep in mind that the RF environment at the Hamvention is challenging and the arena blocks low elevations to the north and northwest. Due to these factors, we will only be attempting passes with a peak elevation greater than 10 degrees. Please stop by for any satellite pass or at any other time if you have questions about satellite operating.

A special demonstration on SO-50 will take place during the 12:19pm (16:19 UTC) pass on Saturday May 21st. Nine year old Hope Lea, KM4IPF, will operate that pass after completing her talk at the ARRL Youth Forum.

If you are not attending the Hamvention, please call us if you hear the AMSAT demo station on the air!

AMSAT DAYTON HAMVENTION DEMOS - 2016

TZ = UTC

N 39.820328 W 84.255224 ELEV. 296 M

MIN PEAK ELEV. = 10 DEG

GRID = EM79ut

* = Listen Only Pass - Telemetry, Doppler, Ant. Perf, etc.

WinAos QTH: -84.3/39.8 T#: 14019 Sat.: 12 [Standard]

Day	Objects		AOS (U)	LOS	Period	maxEl	AZ
20.05.2016	XW-2A		12:17	12:26	09	62	016 - 187
20.05.2016	ISS	*	12:28	12:37	09	40	300 - 143
20.05.2016	NO-84	*	12:28	12:38	10	21	294 - 168
20.05.2016	AO-85		12:45	12:59	14	62	200 - 036
20.05.2016	XW-2F		12:52	13:01	09	19	351 - 224
20.05.2016	AO-85		14:26	14:40	14	23	249 - 025
20.05.2016	AO-73		14:51	15:02	11	56	018 - 185
20.05.2016	EO-79	*	15:04	15:14	10	14	119 - 004
20.05.2016	SO-50		15:53	16:06	13	50	332 - 137
20.05.2016	FO-29		16:01	16:17	16	18	111 - 358
20.05.2016	AO-73		16:28	16:36	08	11	343 - 242
20.05.2016	EO-79	*	16:39	16:50	11	49	180 - 343
20.05.2016	SPROUT	*	16:50	16:59	09	14	039 - 152
20.05.2016	UKUBE-1	*	16:57	17:08	11	30	025 - 171
20.05.2016	SO-50		17:34	17:45	11	17	309 - 187
20.05.2016	FO-29		17:43	18:02	19	88	163 - 348
20.05.2016	AO-07		18:12	18:28	16	15	099 - 356
20.05.2016	SPROUT	*	18:25	18:36	11	44	004 - 209
20.05.2016	UKUBE-1	*	18:33	18:44	11	22	357 - 225
20.05.2016	FO-29		19:31	19:46	15	16	219 - 331
20.05.2016	AO-07		20:01	20:22	21	67	150 - 346

WinAos QTH: -84.3/39.8 T#: 14020 Sat.: 12 [Standard]

Day	Objects		AOS (U)	LOS	Period	maxEl	AZ
21.05.2016	NO-84	*	12:04	12:14	10	22	295 - 167
21.05.2016	XW-2F		12:39	12:49	10	26	358 - 217
21.05.2016	AO-85		13:11	13:25	14	59	222 - 030
21.05.2016	XW-2C		13:12	13:20	08	11	345 - 238

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 21.05.2016  XW-2A        13:17 13:26    09   19  353 - 223
 21.05.2016  SO-50        14:38 14:50    12   17  340 - 108
 21.05.2016  AO-85        14:54 15:05    11   12  274 - 021
 21.05.2016  AO-73        15:10 15:21    11   80  011 - 196
 21.05.2016  EO-79    *   15:16 15:26    10   18  127 - 004
 21.05.2016  SO-50        16:19 16:31    12   61  324 - 157
 21.05.2016  FO-29        16:49 17:08    19   39  137 - 353
 21.05.2016  EO-79    *   16:51 17:02    11   36  187 - 339
 21.05.2016  SPROUT   *   17:04 17:15    11   21  029 - 163
 21.05.2016  UKUBE-1  *   17:14 17:26    12   45  020 - 182
 21.05.2016  FO-29        18:34 18:53    19   42  189 - 342
 21.05.2016  SPROUT   *   18:40 18:51    11   30  360 - 217
 21.05.2016  UKUBE-1  *   18:51 19:00    09   15  349 - 237
 21.05.2016  AO-07        19:03 19:22    19   31  122 - 351
 21.05.2016  AO-85        20:04 20:14    10   15  345 - 100
 21.05.2016  AO-07        20:54 21:15    21   61  173 - 341

 WinAos   QTH: -84.3/39.8   T#: 14021   Sat.: 12 [Standard]
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     Day     Objects      AOS (U) LOS Period maxEl   AZ
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 22.05.2016  ISS      *   12:19 12:27    08   17  288 - 162
 22.05.2016  XW-2F        12:27 12:37    10   36  001 - 210
 22.05.2016  XW-2A        12:44 12:54    10   47  006 - 203
 22.05.2016  XW-2C        13:00 13:09    09   16  350 - 229
 22.05.2016  AO-85        13:37 13:51    14   29  242 - 026
 22.05.2016  AO-73        13:53 14:02    09   12  037 - 147
 22.05.2016  SO-50        15:04 15:16    12   35  337 - 128
 22.05.2016  EO-79    *   15:28 15:39    11   24  135 - 359
 22.05.2016  AO-73        15:29 15:40    11   48  005 - 206
 22.05.2016  FO-29        15:56 16:12    16   17  110 - 359
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[ANS thanks Paul N8HM for the above information]

ÑuSat-1 to Carry AMSAT Argentina Linear Transponder
Launch Scheduled for May 30, 2016.

The Argentinian earth observation satellite ÑuSat-1 will carry a linear transponder built by AMSAT Argentina. The satellite is scheduled to launch on a CZ-4B rocket from Taiyuan Satellite Launch Center in China on May 30, 2016 into a 500 km sun-synchronous orbit with an inclination of 97.5 degrees and a Local Time of the Ascending Node (LTAN) of 10:30.

The AMSAT Argentina U/v inverting transponder, named LUSEX, wiil have an uplink of 435.935 MHz to 435.965 MHz and a downlink of 145.935 MHz to 145.965 MHz. Total power output is 250 mW. There will also be a CW beacon at 145.900 MHz with a power output of 70 mW.

For more information, see the AMSAT Argentina Facebook group.
https://www.facebook.com/Amsat.LU/

[ANS thanks AMSAT Argentina for the above information]

ARISS at Dayton Hamvention

If you will be attending Hamvention next week, be sure to stop by the AMSAT area in the Ball Arena. We will have members of the ARISS team on-hand at all times and some of our ISS hardware (radios and an antenna) on display.

During the AMSAT Forum (Saturday, 11:15-1:30), Frank Bauer will be presenting ARISS status and future plans.

Also on Saturday, from 2:30-3:00, we will have a face-to-face meeting for anyone interested in ARISS. We'd like to see members of the ARISS team there. We will meet outside near AMSAT's Satellite Demo area (outside the Ball Arena entrance) or, if it's raining, inside at the ARISS display.

[ANS thanks Dave W8ASS for the above information]

CY9C DXpedition to St. Paul Island Announces Satellite Operation

The CY9C DXpedition to St. Paul Island, scheduled for August 19, 2016 – August 29, 2016, has announced that Lee Imber, WW2DX, has joined the DXpedition team and will add satellite operations, as well as 2 meter EME and 6 meter operations, to the DXpedition plans.

St. Paul Island is located in gridsquare FN97 in the Cabot Strait between Cape Breton Island, Nova Scotia and Cape Ray, Newfoundland and is a separate entity on the ARRL DXCC list. It also counts as a country for the AMSAT OSCAR Satellite Communications Achievement Award, AMSAT OSCAR Sexagesimal Award, and AMSAT OSCAR Century Award. Most of Europe and North America should be easily workable from this location. St. Paul Island has not been activated on satellite since July 1998.

For further information about the DXpedition, please see the CY9C DXpedition website (http://www.cy9dxpedition.com/)

This operation and other planned amateur satellite grid/DX operations are posted on the AMSAT Upcoming Satellite Operations page (http://www.amsat.org/?page_id=3921)

[ANS thanks Paul N8HM for the above information]

Top 10 Reasons to Come to Dayton HAMVENTION

10. Rub shoulders with 25,000 of your best friends at the largest hamfest in the United States, including all of the AMSAT Directors and senior officers. See the latest equipment from Icom, Yaesu, Kenwood, Flex, Alinco, M2, Arrow, and many other manufacturers of amateur radio equipment and accessories. Take advantage of discounted pricing you won't find anywhere else.

9. Find out how to organize a contact with the astronauts on the International Space Station for your local school or youth group from our Education and ARISS experts.

8. Pickup the latest AMSAT golf shirts, T-shirts, and hats. Get your copy of the updated "Amateur Satellite Frequency Guide"

(laminated frequency chart) and Gould Smith's just revised "Getting Started with Amateur Satellites" (book). We'll also have assembled wide-band preamps and antennas that are great for portable operation.

7. See demonstrations of SatPC32 and MacDoppler satellite tracking software, and get your operational questions answered. Meet Don Agro, author of MacDoppler (Friday & Saturday, 2-3 p.m.). See a demonstration of the LVB Tracker, a computer interface to the Yaesu azimuth-elevation rotors. Talk with Mike Young, who has built more LVB Trackers than anyone else. Assembled LVB Trackers will be available.

6. Hear a team presentation at the joint AMSAT/TAPR dinner on the new AMSAT Ground Terminal (AGT). AGT is using Five and Dime (5 GHz uplink, 10 GHz downlink) technology that is being developed for the Phase 3E (P3E) HEO satellite, the Phase 4B (P4B) geosynchronous satellite, and the Cube Quest Challenge (CQC) lunar mission. While much of the P3E and P4B *satellite* development is classified, the AGT is all open source and public information.

5. Hear the latest on the *five* Fox satellites, P3E, P4B, CQC, the International Space Station, other current and future satellites, education news, and an AMSAT update at the AMSAT Forum Saturday, from 11:15 to 1:30.

4. Get one-on-one guidance on setting up your satellite station and making contacts at our "Beginner's Corner". Witness live demonstrations of contacts through satellites AO-7, AO-73, AO-85, FO-29, SO-50, XW-2A, XW-2C, and XW-2F using handheld antennas.

3. Meet and interact with some of the Engineering Team members working on the Fox-1 satellites and our new Five and Dime AMSAT ground terminal. Learn all of the public information and get breaking news on the Virginia Tech plans for the Phase 3E and Phase 4B satellites.

2. Get satellite station and operating tips from some of the best satellite operators in the country, including John Papay K8YSE (1,575 grids confirmed), Doug Papay KD8CAO (1,159 grids), Drew Glasbrenner KO4MA (1,343 grids), Paul Stoetzer (450 grids), and Wyatt Dirks AC0RA (938 grids).

1. Receive special premiums when you join or renew your AMSAT membership at Dayton, including an updated "Amateur Satellite Frequency Guide" (laminated frequency chart), and special pricing on the SatPC32 satellite tracking software.

[ANS thanks Steve N9IP for the above information]

Saturday AMSAT Dayton Forum

The AMSAT forum will be Saturday morning from 11:15 a.m. through 1:30 p.m. in Forum Room 5. See the commercial vendor layout map in the Hamvention program or the Hamvention website for the location of Forum Room 5 (same as the last few years).

The following speakers will be presenting at the AMSAT Forum, moderated by Mark Hammond, N8MH:

“AMSAT Status Report” Barry Baines, WD4ASW, AMSAT-NA President, will highlight recent activities within AMSAT and discuss some of our challenges, accomplishments, projects, and any late breaking news.

“AMSAT-NA Satellite Program” Jerry Buxton, N0JY, AMSAT-NA Engineering Vice President, will review the upcoming launches of four Fox spacecraft and exciting new engineering developments.

“AMSAT’s HEO and GSO Plans” Bob McGwier, N4HY, AMSAT-NA Director, will discuss AMSAT-NA opportunities for High Earth Orbit and Geo-Synchronous Orbit satellites.

“AMSAT Satellite Operations” Drew Glasbrenner, KO4MA, AMSAT-NA Operations Vice President, will survey the current operational amateur satellites, as well as those planned for launch in the next year.

“ARISS Report 2016” Frank Bauer, KA3HDO, AMSAT-NA Vice President for Human Spaceflight, will discuss ARISS developments & operation on the International Space Station.

“Teaching STEM Using the Fox Satellites” Joe Spier, K6WAO, AMSAT-NA Educational Relations Vice President, will explain how the Fox MEMS gyroscopes, radiation experiments, and cameras will be used to teach Science, Technology, Engineering, and Math (STEM).

[ANS thanks AMSAT Office for the above information]

AMSAT Thursday Dinner and Beverages at Tickets Pub and Eatery

Dinner and beverages at Tickets Pub and Eatery

Thursday night, 1800-2000. The annual AMSAT “Dinner at Tickets” party will be held Thursday, May 19, at 1800 EDT at the Tickets Pub & Eatery. Everyone is invited regardless of whether or not they helped with setup or plan to work in the booth.

You’ll find a great selection of Greek and American food and excellent company! No program or speaker, just good conversation. Food can be ordered from the menu; drinks (beer, wine, sodas and iced tea) are available at the bar. Come as you are. Bring some friends and have a great time the night before Hamvention®.

Tickets Pub and Eatery,
7 W. Main St.
Fairborn, OH 45324
(937) 878-9022

http://www.ticketspub.com/

[ANS thanks AMSAT Office for the above information]

ARISS News

+ A Successful contact was made between The Kings School, Ottery St Mary, Devon, UK and Astronaut Timothy Peake KG5BVI using Callsign

GB1SS. The contact began 2016-05-09 09:26 UTC and lasted about nine and a half minutes. Contact was direct via GB1OSM.
ARISS Mentor was Ciaran MØXTD.

+ A Successful contact was made between H.A.L. School, Lucknow, India and Astronaut Tim Kopra KE5UDN using Callsign NA1SS. The contact began 2016-05-12 08:11 UTC and lasted about nine and a half minutes. Contact was telebridge via K6DUE.
ARISS Mentor was Satoshi 7M3TJZ.

+ A Successful contact was made between AstroNuts Kids Space Club Academy, David Dunlap Observatory, Richmond Hill, Ontario, Canada, and Astronaut Timothy Peake KG5BVI using Callsign NA1SS. The contact began 2016-05-14 17:37:12 UTC and lasted about nine and a half minutes. Contact was telebridge via W6SRJ.
ARISS Mentor was Steve VE3TBD.

Upcoming ARISS Contact Schedule as of 2016-05-13 06:30 UTC

Quick list of scheduled contacts and events:

Essex Heights Primary School, Mount Waverley, Victoria, Australia, telebridge via VK5ZAI
The ISS callsign is presently scheduled to be NA1SS
The scheduled astronaut is Jeff Williams KD5TVQ
Contact is a go for: Fri 2016-05-20 08:35:16 UTC

[ANS thanks ARISS, Charlie AJ9N and David AA4KN for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
EMike McCardel, AA8EM, former KC8YLD
kc8yld at amsat dot org